SCIENCE NEWS INDEX

Vol. 106, Nos. 1-26, July-December, 1974, pp. 1-416
Science Service, Washington, D.C. 20036

A

AEC 12-15, 31, 117, 248, 330
AEROS-2 ... 36
AFOS system ... 120
ALADDIN '74 program ... 6
ALSEP working ... 399
ANS satellite ... 131
ARIES ... 136, 137
ATP ... 9
Depletion ... 90
ATS-6 ... 214
Aagaard, A. K. ... 363
Abelson, John ... 180
Abortions
Dalkon Shield ... 22
Synthetic prostaglandins ... 23
Teenagers ... 6
Abraham, Milton E. ... 139
Accelerator technology
Bevalac ... 102
Fermilab ... 298-300
Acne treatment ... 344
Acrylonitrile ... 155
Acuna, Mario ... 375
Acupuncture tested ... 358
Adair, Robert K. ... 56
Adams, Charles N. ... 216
Ade, P. A. R. ... 103
Adenyl cyclase ... 248
Adler, Norman ... 73
Adovasio, James ... 84
Aerodynamics, Industrial ... 189
Aerosol propellants ... 212
Fluorocarbon study ... 341
Aerosol scattering
Sunset colors ... 216
Afar Research Expedition ... 276
African countries
Environmental guidelines ... 377
Afterimages ... 230
Aging
Bone density, muscles ... 344
Paranoid behavior ... 280
Smoke pollution ... 216
Vitamin E ... 199
Agriculture, Developing countries ... 58, 309
Aiello, John R. ... 282
Air conditioners ... 88
Air pollutants
Aluminum particles 88
Health & Cost Study 166
Heat-island effect ... 188
Air quality standards ... 148
Aircraft crash tests. 15, 83
Aircraft engine industry ... 330
Aircraft near airports ... 9
Aksnes, Kaare ... 279
Albert, Roy Ernest ... 155
Alberte, R. S. ... 104
Alcohol, Effect of ... 232
Alcohol consumption ... 39
Aldrin, Dieldrin ... 86, 231
Alexander, E. J. ... 228
Allen, Roblee P. ... 57
Alonso, Jose R. ... 164
Alpha-Foetoprotein ... 57
Alpha waves ... 294
Alpher, Ralph A. ... 317
Alpine front ... 377
Altman, Stuart ... 38
Altruism ... 346
Aluminum pollution ... 88
Alvin ... 87, 118, 119
Amateur radio OSCAR 7 ... 342
Amino acid mixtures ... 91
Amos, Bernard ... 315
Anders, William A. ... 295
Andersen, S. O. ... 316
Anderson, Don L. ... 198, 233
Anderson, John ... 375
Anderson, Kenneth K. ... 232
Anderson, Mary Elizabeth ... 343
Anesthesia, Childbirth ... 348
Anesthesia, Herbal ... 398
Anesthetic halothane ... 103
Anesthetic lorazepam ... 247
Anfinsen, Christian 383, 389
Anglem, Thomas J. ... 232
Anglo-Australian Telescope ... 295
Antarctic Ice Sheet ... 344
Antibiotics engineering ... 281, 392
Antibiotic resistance ... 119
Antibody, Star-shaped ... 9
Antibody genetics ... 253
Antibody immunotherapy 57
Antifertility agent ... 23
Antigens, Synthetic ... 383
Antigens matching ... 314
Antiproton cross section ... 20
Anxiety
Alpha waves ... 294
Caffeine intake ... 9
Apollo program anniversary ... 51, 94
Apollo-Soyuz rendezvous ... 55
Soyuz 16 ... 359
Aposhian, H. Vasken ... 5
Appel, Jeffrey A. ... 367
Applegate, Shelton ... 247
Aquaculture
Sewage-based . 170, 171
Arber, Werner ... 277
Archaeology, China ... 395
Arecibo Observatory
Refurbished ... 125
Arecibo telescope
Binary message ... 325
Rededication ... 309
Ariel-5 ... 215
Arms, Karen ... 73
Armstrong, Neil ... 51
Armstrong, Thomas ... 390
Arnon, Ruth ... 383
Arsenic residues ... 184
Arsenic workers ... 149
Artificial blood ... 202, 203
Artificial gene ... 180
Artificial pancreas ... 216
Artyukhin, Yuri . 22, 37, 55
Asbestos fibers ... 331
Asbestos workers' families ... 204
Asfew, Alemeyu ... 276
Ashby, Lord ... 277
Ashkenase, Lea J. ... 103
Aspirin trial project ... 38
Asteroids ... 135
Asthenosphere ... 118
Astrogram ... 325
Astronomical instruments 115, 123, 138
Astronomy
Infrared 135, 138, 150, 398
Molecular ... 277, 398
Special issue ... 113-144
Atheists-only grants ... 105
Atlantic Ocean floor ... 69
Atmosphere, Global ... 152
Atmospheric distortion ... 133
Atmospheric models ... 6
Atmospheric studies
Project ALADDIN ... 6
Project da Vinci ... 182
Atmospheric turbulence ... 132
Atomic clock
Rubidium vapor ... 27
Atomic Energy Commission
ERDA, NRC, ERC ... 248
MFBR program ... 12-15
Rasmussen study ... 117, 330
Uranium tailings ... 31
Augustine, Bob ... 330
Aumento, Fabrizio ... 69
Austin, A. L. ... 28
Austrian, Robert ... 381
Auto emissions, Health and cost effects ... 166
Autoregulation, Thermal ... 263
Autumn
Plant suicide ... 316
Axelrod, Julius .. 285, 389
Azrian, Nathan H. ... 151
Azur satellite ... 36

B

BL Lacertid ... 398
BOMEX data ... 332
Babies
Anesthetized birth ... 348
Cigarette smoke ... 376
High-risk ... 199
Meningitis antigens 381
Test-tube ... 37, 53
Bacteria
Antibiotic-resistant . 119
Genetically altered . 277
Toxin-producing ... 316
Bacterial plasmid DNA ... 52
Bacterial virus ... 293
Baja California
Fossil sites ... 247
Baker, Don H. III ... 73
Baker, Victor R. ... 251
Baker, William O. ... 4
Ballard, Harold ... 294
Balloon for science ... 182, 294
Baltimore, David . 52, 294
Bandura, Albert ... 151
Bannister, William W. . 287
Barish, B. C. ... 8
Bark beetle pheromone 73
Barker, Peter ... 54
Barnard, Christiaan . 358
Barnes, R. C. ... 116
Bartnicki-Garcia, Salomon ... 293
Basin, Ted ... 46
Basset, Preston ... 234
Bean, Alan ... 399
Beast or Angel? . 346, 347
Becker, U. J. ... 324
Becklin, E. E. ... 169
Beerer, Joseph G. ... 197
Behavior, Genes and environment ... 331
Behavior control ... 263
Behavior modification
Nervous habits ... 151
Obesity ... 76
Behavior therapy
Non-aversive ... 168
Belagaje, Rama-Moorthy ... 180
Bends, Sea snakes ... 204
Beno, Milton P. ... 139
Berg, Paul ... 52, 53, 277
Bernard, Claude ... 73
Bernoulli, Daniel ... 234
Bernstein, David T. ... 232
Betelgeuse ... 389
Betts, Alan ... 334
Betz, Robert ... 299
Bevalac ... 102
Bevis, Douglas ... 37, 53
Bicentennial exhibit ... 153
Bickwit, Len ... 155
Bierly, Eugene ... 334
Biodegradable resin ... 330
Biohazards, Potential . 52
Biological molecules ... 57
Biological rhythms ... 156
Biosatellite, Soviet ... 389
Bioselection ... 124
Biosphere reserves ... 360
Bird breeding signal ... 41
Birkinshaw, Keith ... 46
Birnstiel, Max ... 277
Birth control
Male contraceptive . 85
Teenagers ... 6
Birth control pills
Birth defects ... 261
Mental sharpness ... 285
Birth defects
Hormones linked to. 261
Black holes
Billions of ... 56
Massive photons ... 296
Black light
Effects on cells ... 342
Blanco, Victor M. ... 295
Blau, Theodore H. ... 220
Blizard, David A. ... 331
Blood cleaning ... 184
Blood collection program ... 38
Blood infection ... 91
Blood isoenzymes ... 266
Blood substitute ... 203
Blumenthal, M. N. ... 89
Bodman, Hollis S. ... 45
Boeing 737 jetliner ... 9
Boerma, Addeke H. 278, 308, 326
Bohlool, B. B. ... 57
Bohm, David ... 46
Bone diseases ... 348
Bone foreshafts ... 231
Bones and paleontologists ... 86
Bonneau, Daniel ... 132
Bonnichsen, Robson ... 230
Bonnor, W. B. ... 124
Bono, Phil ... 74
Borgstrom, Georg ... 340
Borlaug, Norman E. 54, 218, 219, 292
Botulism and gangrene 316
Bowden, Lord ... 153
Bowel movements ... 139
Bowen, G. D. ... 252
Bowen, William ... 39
Bowman, Robert E. ... 103
Boyer, Herbert ... 52
Brady, Roscoe O. ... 326
Brain development Human ... 230
Brain maturation Male and female ... 310
Brand, Vance ... 55
Brandvold, Donald K. . 73
Brandvold, Glen ... 72
Brans-Dicke theory ... 390
Breast Cancer Detection program . 38
Transfer factor ... 139
Breast surgery Radical ... 232
Breathable liquids 202, 203
Brecher, Kenneth ... 287
Breeder reactors ... 374
Assessment needed 259
Hazards and risks 13, 15
MFBR program .. 12, 15
Safety ... 15
Waste storage ... 15
Bretz, J. Harlen ... 250
Briggs, Peter ... 137
Brine deposits ... 28
Brinkman, A. C. ... 121
Brocoum, Stephen I. . 233
Brodsky, Stanley J. ... 60
Bronchiolitis ... 285
Bronowski, Jacob 119, 153
Brown, Larry ... 372
Brown, Lester ... 292
Brown, Donald D. ... 253
Brown, Michael S. ... 22
Brownlee, G. G. ... 294
Bruce, David L. ... 232
Brunelle, Richard L. . 267
Bryan, Wilfred B. ... 118
Bubble chamber 300, 365
Buchnea, Alexander ... 88
Buchnea, Dmytro ... 88
Buffington, Andrew 133, 138
Bullard, Edward C. ... 72
Bullet's trajectory ... 40
Burbidge, E. Margaret 117
Burgess, Barry ... 108
Burke, William L. ... 132
Burkholder, Peter M. . 232
Burkitt, D. P. ... 139
Bush, Vannevar ... 4
Bushway, Alfred A. ... 164
Butz, Earl L. ... 54, 278, 292, 308, 340, 349

C

CANDU ... 217
CMME ... 155
COHb levels in blood 148
Cadaver transplants ... 315
Caffeine intake ... 9
Calcium, Intercellular . 327
Callahan, Daniel ... 53
Calley, J. R. T. ... 376
Caloris Basin ... 196
Cama, Lovgi D. ... 392
Campbell, Rita R. ... 252
Cancer
Arsenic workers ... 149
Asbestos ... 204
Breast ... 38, 139, 232, 323
Colon ... 379
Cyclic AMP ... 248
Immunotherapies ... 150
Lung ... 204
Oral ... 39
Vinyl chloride ... 89
Cancer cells ... 373
Cancer remissions ... 327
Animal virus ... 149
Cancer research ... 39
Cancer virus
DNA molecules ... 277
Genes block enzymes 248
Immunizes ... 149
Transfer factor ... 285
Cannon, Robert H. Jr. 246
Cantu, Antonio A. ... 267
Capps, R. W. ... 150
Capranica, Robert R. . 37
Capurro, Pietro U. ... 157
Carbon-dioxide lasers . 107
Carbon-fiber plastic ... 40
Carbon monoxide ... 148
Carboxyhemoglobin ... 148
Carcinogens ... 311
Chlorinated water ... 311
Inorganic arsenic ... 149
Plastics ... 71
Carlson, Peter S. ... 219
Carlton, William W. ... 164
Carpenter, R. G. ... 199
Carrigan, Richard A. ... 299
Carroll, Edward J., Jr. 327
Carter, B. D. ... 124
Casani, John ... 197
Casey, Kenneth L. ... 261
Cataracts ... 344
Catastrophe theory ... 166
Cell biology Nobel Prizes ... 244
Cell DNA ... 52
Cell growth, Abnormal 41
Cell membrane ... 331
Biological rhythm ... 156
In diseases ... 248
Cell wall formation ... 293
Cells
Enzyme leakage ... 9
Human ... 199, 310
Hybrid ... 277
Immobilized ... 204
Mammalian ... 5
Centenarians, Caucasus 101
Cereal fiber intake 139, 379
Cermak, Jack E. ... 189-191
Cerro Tololo ... 295
Chaff seeding ... 41
Chang, Louis W. 103, 232
Changnon, Stanley ... 41
Channeled Scablands 241, 250
Chanock, Robert ... 383
Chapline, G. F. ... 56
Charge asymmetry ... 55
Charnley, John ... 327
Chemical lasers ... 21
Chemical Substances Board ... 155
Chemotactic mechanism 7
Chen, Min ... 324
Chen, Tseh An ... 286
Cherry, Lorinda L. ... 167
Childbirth, Anesthetized ... 348
Children
Mother's diet ... 108
Parents' smoking .. 376
Underachievers ... 73
Chimpanzee Lana ... 376
China
Arboretum exchanges 104
Archaeology ... 395
Han Dynasty tombs 152
Herbal anesthesia . 398
Interested in ARIES 137
Luminescent fungus 169
Population count .. 377
Chinook helicopter ... 15
Chinomsky, William .. 324
Chitin-microfibrils ... 293
Chlorinated hydrocarbons ... 86
Inhibit chemotaxis . 7
Chlorine treatment ... 311
Affects fish-hatching 8
Chlorophyll mutations 104
Chocolate, Migraines . 85
Cholesterol, High Homozygotes ... 22
Chow, Tsaihwa J. ... 215
Choy, Edmund M. ... 348
Christensen, Burton G. 392
Chromosomes
Inter-specie hybrid . 277
Mammalian ... 5
Two-rule interferon . 89
Chu, Chao K. ... 286
Chung, Anthony ... 315
Ciaranello, Roland D. . 285
Cicerone, Ralph J. ... 181
Cigarette smoke ... 376
Cities, Livability ... 56
Clark, Frederick A. Jr. 22
Clark, Kare ... 234
Clark, Leland ... 202, 203
Clark, Richard ... 349
Clark, Robert C., Jr. ... 331
Clarke, Arthur C. ... 46
Claude, Albert ... 244
Clean Air Act NAS report data ... 166
Cleaver, A. V. ... 46
Climate changes ... 399
Irrigation effect ... 41
Ozone destruction . 181
Climatic Impact Committee ... 341
Clostridium ... 316
Cloudseeding, Winter . 233
Clovis hunters ... 231
Club of Rome Second report ... 269
Coal, High-sulfur ... 260
Coal, Shift to ... 374
Coal burning Emission standards 217
Coal costs, Western .. 185
Coan, Ralph ... 359
Cochran, Thomas ... 117
Cognitive dissonance . 378
Cohen, Peter ... 247
Cohen, Stanley ... 52
Coleman, Lamar ... 111
Collette, John ... 285
Collins, C. B. ... 124
Colombo, Giuseppe .. 197
Colon cancer ... 379
Colorado River basin . 139
Colors of the sky ... 216
Colson, Charles ... 378
Communications satellites Domestic commercial 246
Communications, Optical ... 296
Computer-proofreader . 167
Concorde record ... 151
Concussion, Effect of . 216
Conifer fossils ... 316

SCIENCE NEWS INDEX

Vol. 106, Nos. 1-26, July-December, 1974, pp. 1-416
Science Service, Washington, D.C. 20036

A

AEC 12-15, 31, 117, 248, 330
AEROS-2 ... 36
AFOS system ... 120
ALADDIN '74 program ... 6
ALSEP working ... 399
ANS satellite ... 131
ARIES ... 136, 137
ATP ... 9
Depletion ... 90
ATS-6 ... 214
Aagaard, A. K. ... 363
Abelson, John ... 180
Abortions
Dalkon Shield ... 22
Synthetic prostaglandins ... 23
Teenagers ... 6
Abraham, Milton E. ... 139
Accelerator technology
Bevalac ... 102
Fermilab ... 298-300
Acne treatment ... 344
Acrylonitrile ... 155
Acuna, Mario ... 375
Acupuncture tested ... 358
Adair, Robert K. ... 56
Adams, Charles N. ... 216
Ade, P. A. R. ... 103
Adenyl cyclase ... 248
Adler, Norman ... 73
Adovasio, James ... 84
Aerodynamics, Industrial ... 189
Aerosol propellants ... 212
Fluorocarbon study ... 341
Aerosol scattering
Sunset colors ... 216
Afar Research Expedition ... 276
African countries
Environmental guidelines ... 377
Afterimages ... 230
Aging
Bone density, muscles ... 344
Paranoid behavior ... 280
Smoke pollution ... 216
Vitamin E ... 199
Agriculture, Developing countries ... 58, 309
Aiello, John R. ... 282
Air conditioners ... 88
Air pollutants
Aluminum particles 88
Health & Cost Study 166
Heat-island effect ... 188
Air quality standards ... 148
Aircraft crash tests. 15, 83
Aircraft engine industry ... 330
Aircraft near airports ... 9
Aksnes, Kaare ... 279
Albert, Roy Ernest ... 155
Alberte, R. S. ... 104
Alcohol, Effect of ... 232
Alcohol consumption ... 39
Aldrin, Dieldrin ... 86, 231
Alexander, E. J. ... 228
Allen, Roblee P. ... 57
Alonso, Jose R. ... 164
Alpha-Foetoprotein ... 57
Alpha waves ... 294
Alpher, Ralph A. ... 317
Alpine front ... 377
Altman, Stuart ... 38
Altruism ... 346
Aluminum pollution ... 88
Alvin ... 87, 118, 119
Amateur radio OSCAR 7 ... 342
Amino acid mixtures ... 91
Amos, Bernard ... 315
Anders, William A. ... 295
Andersen, S. O. ... 316
Anderson, Don L. ... 198, 233
Anderson, John ... 375
Anderson, Kenneth K. ... 232
Anderson, Mary Elizabeth ... 343
Anesthesia, Childbirth ... 348
Anesthesia, Herbal ... 398
Anesthetic halothane ... 103
Anesthetic lorazepam ... 247
Anfinsen, Christian 383, 389
Anglem, Thomas J. ... 232
Anglo-Australian Telescope ... 295
Antarctic Ice Sheet ... 344
Antibiotics engineering ... 281, 392
Antibiotic resistance ... 119
Antibody, Star-shaped ... 9
Antibody genetics ... 253
Antibody immunotherapy 57
Antifertility agent ... 23
Antigens, Synthetic ... 383
Antigens matching ... 314
Antiproton cross section ... 20
Anxiety
Alpha waves ... 294
Caffeine intake ... 9
Apollo program anniversary ... 51, 94
Apollo-Soyuz rendezvous ... 55
Soyuz 16 ... 359
Aposhian, H. Vasken ... 5
Appel, Jeffrey A. ... 367
Applegate, Shelton ... 247
Aquaculture
Sewage-based . 170, 171
Arber, Werner ... 277
Archaeology, China ... 395
Arecibo Observatory
Refurbished ... 125
Arecibo telescope
Binary message ... 325
Rededication ... 309
Ariel-5 ... 215
Arms, Karen ... 73
Armstrong, Neil ... 51
Armstrong, Thomas ... 390
Arnon, Ruth ... 383
Arsenic residues ... 184
Arsenic workers ... 149
Artificial blood ... 202, 203
Artificial gene ... 180
Artificial pancreas ... 216
Artyukhin, Yuri . 22, 37, 55
Asbestos fibers ... 331
Asbestos workers' families ... 204
Asfew, Alemeyu ... 276
Ashby, Lord ... 277
Ashkenase, Lea J. ... 103
Aspirin trial project ... 38
Asteroids ... 135
Asthenosphere ... 118
Astrogram ... 325
Astronomical instruments 115, 123, 138
Astronomy
Infrared 135, 138, 150, 398
Molecular ... 277, 398
Special issue ... 113-144
Atheists-only grants ... 105
Atlantic Ocean floor ... 69
Atmosphere, Global ... 152
Atmospheric distortion ... 133
Atmospheric models ... 6
Atmospheric studies
Project ALADDIN ... 6
Project da Vinci ... 182
Atmospheric turbulence ... 132
Atomic clock
Rubidium vapor ... 27
Atomic Energy Commission
ERDA, NRC, ERC ... 248
MFBR program ... 12-15
Rasmussen study ... 117, 330
Uranium tailings ... 31
Augustine, Bob ... 330
Aumento, Fabrizio ... 69
Austin, A. L. ... 28
Austrian, Robert ... 381
Auto emissions, Health and cost effects ... 166
Autoregulation, Thermal ... 263
Autumn
Plant suicide ... 316
Axelrod, Julius .. 285, 389
Azrian, Nathan H. ... 151
Azur satellite ... 36

B

BL Lacertid ... 398
BOMEX data ... 332
Babies
Anesthetized birth ... 348
Cigarette smoke ... 376
High-risk ... 199
Meningitis antigens 381
Test-tube ... 37, 53
Bacteria
Antibiotic-resistant . 119
Genetically altered . 277
Toxin-producing ... 316
Bacterial plasmid DNA ... 52
Bacterial virus ... 293
Baja California
Fossil sites ... 247
Baker, Don H. III ... 73
Baker, Victor R. ... 251
Baker, William O. ... 4
Ballard, Harold ... 294
Balloon for science ... 182, 294
Baltimore, David . 52, 294
Bandura, Albert ... 151
Bannister, William W. . 287
Barish, B. C. ... 8
Bark beetle pheromone 73
Barker, Peter ... 54
Barnard, Christiaan . 358
Barnes, R. C. ... 116
Bartnicki-Garcia, Salomon ... 293
Basin, Ted ... 46
Basset, Preston ... 234
Bean, Alan ... 399
Beast or Angel? . 346, 347
Becker, U. J. ... 324
Becklin, E. E. ... 169
Beerer, Joseph G. ... 197
Behavior, Genes and environment ... 331
Behavior control ... 263
Behavior modification
Nervous habits ... 151
Obesity ... 76
Behavior therapy
Non-aversive ... 168
Belagaje, Rama-Moorthy ... 180
Bends, Sea snakes ... 204
Beno, Milton P. ... 139
Berg, Paul ... 52, 53, 277
Bernard, Claude ... 73
Bernoulli, Daniel ... 234
Bernstein, David T. ... 232
Betelgeuse ... 389
Betts, Alan ... 334
Betz, Robert ... 299
Bevalac ... 102
Bevis, Douglas ... 37, 53
Bicentennial exhibit ... 153
Bickwit, Len ... 155
Bierly, Eugene ... 334
Biodegradable resin ... 330
Biohazards, Potential . 52
Biological molecules ... 57
Biological rhythms ... 156
Biosatellite, Soviet ... 389
Bioselection ... 124
Biosphere reserves ... 360
Bird breeding signal ... 41
Birkinshaw, Keith ... 46
Birnstiel, Max ... 277
Birth control
Male contraceptive . 85
Teenagers ... 6
Birth control pills
Birth defects ... 261
Mental sharpness ... 285
Birth defects
Hormones linked to. 261
Black holes
Billions of ... 56
Massive photons ... 296
Black light
Effects on cells ... 342
Blanco, Victor M. ... 295
Blau, Theodore H. ... 220
Blizard, David A. ... 331
Blood cleaning ... 184
Blood collection program ... 38
Blood infection ... 91
Blood isoenzymes ... 266
Blood substitute ... 203
Blumenthal, M. N. ... 89
Bodman, Hollis S. ... 45
Boeing 737 jetliner ... 9
Boerma, Addeke H. 278, 308, 326
Bohlool, B. B. ... 57
Bohm, David ... 46
Bone diseases ... 348
Bone foreshafts ... 231
Bones and paleontologists ... 86
Bonneau, Daniel ... 132
Bonnichsen, Robson ... 230
Bonnor, W. B. ... 124
Bono, Phil ... 74
Borgstrom, Georg ... 340
Borlaug, Norman E. 54, 218, 219, 292
Botulism and gangrene 316
Bowden, Lord ... 153
Bowel movements ... 139
Bowen, G. D. ... 252
Bowen, William ... 39
Bowman, Robert E. ... 103
Boyer, Herbert ... 52
Brady, Roscoe O. ... 326
Brain development Human ... 230
Brain maturation Male and female ... 310
Brand, Vance ... 55
Brandvold, Donald K. . 73
Brandvold, Glen ... 72
Brans-Dicke theory ... 390
Breast Cancer Detection program . 38
Transfer factor ... 139
Breast surgery Radical ... 232
Breathable liquids 202, 203
Brecher, Kenneth ... 287
Breeder reactors ... 374
Assessment needed 259
Hazards and risks 13, 15
MFBR program .. 12, 15
Safety ... 15
Waste storage ... 15
Bretz, J. Harlen ... 250
Briggs, Peter ... 137
Brine deposits ... 28
Brinkman, A. C. ... 121
Brocoum, Stephen I. . 233
Brodsky, Stanley J. ... 60
Bronchiolitis ... 285
Bronowski, Jacob 119, 153
Brown, Larry ... 372
Brown, Lester ... 292
Brown, Donald D. ... 253
Brown, Michael S. ... 22
Brownlee, G. G. ... 294
Bruce, David L. ... 232
Brunelle, Richard L. . 267
Bryan, Wilfred B. ... 118
Bubble chamber 300, 365
Buchnea, Alexander ... 88
Buchnea, Dmytro ... 88
Buffington, Andrew 133, 138
Bullard, Edward C. ... 72
Bullet's trajectory ... 40
Burbidge, E. Margaret 117
Burgess, Barry ... 108
Burke, William L. ... 132
Burkholder, Peter M. . 232
Burkitt, D. P. ... 139
Bush, Vannevar ... 4
Bushway, Alfred A. ... 164
Butz, Earl L. ... 54, 278, 292, 308, 340, 349

C

CANDU ... 217
CMME ... 155
COHb levels in blood 148
Cadaver transplants ... 315
Caffeine intake ... 9
Calcium, Intercellular . 327
Callahan, Daniel ... 53
Calley, J. R. T. ... 376
Caloris Basin ... 196
Cama, Lovgi D. ... 392
Campbell, Rita R. ... 252
Cancer
Arsenic workers ... 149
Asbestos ... 204
Breast ... 38, 139, 232, 323
Colon ... 379
Cyclic AMP ... 248
Immunotherapies ... 150
Lung ... 204
Oral ... 39
Vinyl chloride ... 89
Cancer cells ... 373
Cancer remissions ... 327
Animal virus ... 149
Cancer research ... 39
Cancer virus
DNA molecules ... 277
Genes block enzymes 248
Immunizes ... 149
Transfer factor ... 285
Cannon, Robert H. Jr. 246
Cantu, Antonio A. ... 267
Capps, R. W. ... 150
Capranica, Robert R. . 37
Capurro, Pietro U. ... 157
Carbon-dioxide lasers . 107
Carbon-fiber plastic ... 40
Carbon monoxide ... 148
Carboxyhemoglobin ... 148
Carcinogens ... 311
Chlorinated water ... 311
Inorganic arsenic ... 149
Plastics ... 71
Carlson, Peter S. ... 219
Carlton, William W. ... 164
Carpenter, R. G. ... 199
Carrigan, Richard A. ... 299
Carroll, Edward J., Jr. 327
Carter, B. D. ... 124
Casani, John ... 197
Casey, Kenneth L. ... 261
Cataracts ... 344
Catastrophe theory ... 166
Cell biology Nobel Prizes ... 244
Cell DNA ... 52
Cell growth, Abnormal 41
Cell membrane ... 331
Biological rhythm ... 156
In diseases ... 248
Cell wall formation ... 293
Cells
Enzyme leakage ... 9
Human ... 199, 310
Hybrid ... 277
Immobilized ... 204
Mammalian ... 5
Centenarians, Caucasus 101
Cereal fiber intake 139, 379
Cermak, Jack E. ... 189-191
Cerro Tololo ... 295
Chaff seeding ... 41
Chang, Louis W. 103, 232
Changnon, Stanley ... 41
Channeled Scablands 241, 250
Chanock, Robert ... 383
Chapline, G. F. ... 56
Charge asymmetry ... 55
Charnley, John ... 327
Chemical lasers ... 21
Chemical Substances Board ... 155
Chemotactic mechanism 7
Chen, Min ... 324
Chen, Tseh An ... 286
Cherry, Lorinda L. ... 167
Childbirth, Anesthetized ... 348
Children
Mother's diet ... 108
Parents' smoking .. 376
Underachievers ... 73
Chimpanzee Lana ... 376
China
Arboretum exchanges 104
Archaeology ... 395
Han Dynasty tombs 152
Herbal anesthesia . 398
Interested in ARIES 137
Luminescent fungus 169
Population count .. 377
Chinook helicopter ... 15
Chinomsky, William .. 324
Chitin-microfibrils ... 293
Chlorinated hydrocarbons ... 86
Inhibit chemotaxis . 7
Chlorine treatment ... 311
Affects fish-hatching 8
Chlorophyll mutations 104
Chocolate, Migraines . 85
Cholesterol, High Homozygotes ... 22
Chow, Tsaihwa J. ... 215
Choy, Edmund M. ... 348
Christensen, Burton G. 392
Chromosomes
Inter-specie hybrid . 277
Mammalian ... 5
Two-rule interferon . 89
Chu, Chao K. ... 286
Chung, Anthony ... 315
Ciaranello, Roland D. . 285
Cicerone, Ralph J. ... 181
Cigarette smoke ... 376
Cities, Livability ... 56
Clark, Frederick A. Jr. 22
Clark, Kare ... 234
Clark, Leland ... 202, 203
Clark, Richard ... 349
Clark, Robert C., Jr. ... 331
Clarke, Arthur C. ... 46
Claude, Albert ... 244
Clean Air Act NAS report data ... 166
Cleaver, A. V. ... 46
Climate changes ... 399
Irrigation effect ... 41
Ozone destruction . 181
Climatic Impact Committee ... 341
Clostridium ... 316
Cloudseeding, Winter . 233
Clovis hunters ... 231
Club of Rome Second report ... 269
Coal, High-sulfur ... 260
Coal, Shift to ... 374
Coal burning Emission standards 217
Coal costs, Western .. 185
Coan, Ralph ... 359
Cochran, Thomas ... 117
Cognitive dissonance . 378
Cohen, Peter ... 247
Cohen, Stanley ... 52
Coleman, Lamar ... 111
Collette, John ... 285
Collins, C. B. ... 124
Colombo, Giuseppe .. 197
Colon cancer ... 379
Colorado River basin . 139
Colors of the sky ... 216
Colson, Charles ... 378
Communications satellites Domestic commercial 246
Communications, Optical ... 296
Computer-proofreader . 167
Concorde record ... 151
Concussion, Effect of . 216
Conifer fossils ... 316

Connolly, Rory B. 71
Conrad, Charles 399
Consumer attitudes .. 168
Continent building ... 358
Contraceptive, Male .. 85
Contraceptive, Oral .. 285
Coons, Albert H. 388
Cooper, A. F. 280
Cooper, Theodore 38
Copans, Stuart A. 348
Cope, Richard 319
Copeland, Edward M. III 91
Copernicus, Nicholaus 252
Coprocoenosis 86
Corn oil molecule 169
Corn "opaque-2" 218
Cortex, Development
Male and female .. 310
Cosmic rays 56, 390
Cosmology
Big numbers.. 317, 319
Gravity weakening? . 116
Isotropic universe .. 124
Cosmonauts, Salyut 37, 55
Cottam, Grant 340
Council for Science
and Technology ... 4
Killian report 59
Council for the
Advancement of
Science Writing .. 71
Counting sheep 263
Cover, R. A. 296
Cox, Donald P. 184
Crab harvest 40
Crab nebula
X-ray emission 311
Craft, H. D. 309
Craig, Jimmie 182
Crashworthiness 10, 11, 15
Creativity
Left-handedness ... 222
Cressman, George P. . 120
Crime laboratories ... 266
Crime rates
Crowded cities 283, 284
Cromwell, Richard ... 279
Crop failures 53, 54
Crotyl mercaptan 232
Crowded households .. 285
Crowding and crime . 282
Crowell, D. H. 221
Crown-gall disease ... 41
Crustal plate
movements 136
Cryobiology 360
Cummings, T. G. 363
Cunningham, William . 197
Curiosity, Innate 301
Cusler, Edward L. 348
Cyana 87, 118
Cyanide, nitrile,
sulfhydril 155
Cybernet network 296
Cyclic AMP deficiency 248
Cygnus X-1
Triple system 287
Czarnecki, Edward ... 197

D

DA240 radio
photograph 165
DDT in milk samples . 286
DNA, Synthetic and
Viral 5
DNA molecules 277
Recombinant 52
DNA repair mechanism 309
Ultraviolet light .. 310
Dabbs, James M., Jr. . 282
Daedalus examines
science 92, 93
Dahlbacka, G. H. 56
Dahlberg, James E. .. 180
Dainton, (Sir) Frederick 153
Dalkon Shield IUD ... 22
Dalziel, Ian W. D.. 54, 233
Dangerous behavior
Prediction 104
Darrow, Karl K. 47
Darwin, Charles 73
Data bank standards . 296
Data cartridge 296
Data Inspection Board 296
Davenport, Fred M. ... 383
David, Edward E. Jr. .. 4
Davidson, Richard 263
Davies, J. N. P. 285
Davies, P. C. W. 124, 317
Davis, Douglas D. 260
Davis, Ronald 52
Davis, Wayne H. 340
Daydreams 376
Deacon, (Sir) George.. 344
Debus, Kurt H. 263
Decision making
Benefits, costs, risks 59
Dedijer, Steven 105
de Duve, Christian 244
Deep Sea Drilling
Leg 36 54
Leg 37 ..... 69, 70
Leg 38 231
Deep Space Network
..... 134, 136
deJong, Rudolph H. ... 261
Delinquents, Predictive 104
Delta rocket 246
Dent, Frederick B. 120
Dental caries 39
Department of Energy
and National
Resources 248
Depression
Abnormal cell
membrane 331
REM sleep 376
DesMarteau, Darryl D. 8
Detergent hazards ... 287
Deuterium pellets ... 106
Developing countries
Agricultural R&D ... 54
Food gap 312
Food options 269
Labor-intensive
agriculture 58
OPEC promises 326, 349
Petroleum imports . 214
Rome conference 54,
278, 292, 308, 312,
326, 340, 349, 351
Wheat and rice ... 218
Diabetes 348
Dials, George E. 185
Diamond forming 8
Dicke, R. F. 124
Dieldrin and Aldrin 86, 231
Dieting behavior
Wives and husbands 76
Diets, Best 344
Diets, Mothers' 108
Dietz, Robert S. 233
Diggelmann, H. 253
Dimethyl ether,
Interstellar 102
Dingell, John D. 340
Dinoflagellates 156
Dirac, P. A. M. 317
Disease susceptibility . 248
Disney, M. J. 398
Diverticuli 379
Dogs, Supercooled ... 360
Donaldson, Kenneth .. 198
Doomsday alternatives 269
Dostrovsky, Israel ... 357
Downs, George 134
Doyle, James A. 43
Dragsten, Paul R. 37
Drake, Frank D. . 309, 325
Dream deprivation 376
Dressler, David 388
Dreyfuss, Yolande 285
Drill bit replacement . 69
Drug abuse 26
Drug overdose
Amberlite XAD-2 ... 184
Dryline 105
Dubos, Rene' 346
Duchowny, Michael S. 348
Dudrick, Stanley J. 90, 91
Duinen, R. J. V. 121
Duing, Walter 334
Dumont, Rene' 308
Dunne, James 9
DuPont, Robert 360
Durham, J. Wyatt ... 373
Dust clouds,
Interstellar 138
Dutch elm disease ... 73
Dyatlov, V. D. 72
Dyce, R. B. 309
Dying person
Ethics criteria 109, 111
Dyson, Freeman J. ... 124

E

EPA
Aldrin, Dieldrin . 86, 231
Asbestos fibers 331
Hot waste water 399
R&D management .. 183
Rasmussen Report . 374
TOSCA 155
Tapwatercarcinogens 311
ERDA 248, 295
ERTS
Iranian station 330
Tornado track 242
ERTS-1 88
Eardrum vibration ... 37
Early man
North America 247
Earth-moon system .. 216
Earth resources data .. 88
ERTS 242, 330
Foreign installations 330
Earthquake, Triggering 198
Earthquake prediction 136
Earthquake-proof wall 287
Earthquakes
Earth's rotation ... 233
Plate interfaces 344
Earth's crust
VLBI tracking . 136, 137
Earth's magnetic poles 72
Earth's rotation 233
Easton, Roger 27
Eaton, Peter 246
Economics, Nobel
Prizes 245
Eddington, Arthur ... 317
Eddy, T. P. 216
Edison, Thomas 73
Educational
achievement 7
Edwards, Charles C. ... 38
Effluent standards 215
Egg cell activation ... 327
Egler, Emory ... 127, 138
Egypt, Schistosomiasis. 377
Einhorn, Martin B. 103, 364
Einstein, Albert 73
Eisele, F. 55
Eisner, Thomas 343
Eklund, Melvin W. 316
El-Antably,
Hamed M. M. 57
Electric cars 217
Electric field sensors . 182
Electric heat pumps .. 217
Electricity, Shift to .. 374
Electron charge
Variable 319
Electron optics 69
Electron/positron
collision 8, 341
Element 104 164
Element 106 164
Ellison, Arthur 46
Emery, J. L. 199
Endangered Species Act
Hawaiian plants ... 204
Marine mammals .. 204
Energy crisis 139
Energy demand
Outside limits 217
Energy options, FEA .. 374
Energy policy, World
Energy Conference . 213
Energy Policy Project 259
Energy Research &
Development
Administration .. 248
Energy resources,
Secondary recovery 217
Energy Resources
Council 248
Energy storer,
Superconducting ... 300
Energy transport 217
Engelmann, Rudolf ... 182
Engine modification .. 358
Engler, Edward M. .. 184
Environmental cost
analysis 185
Environmental Defense
Fund 311
Environmental pollution
Fluorine propellants 286
Vitamin E effect ... 199
Environmental
Protection Agency
See: EPA
Environmental quality 139
Environmentalism,
Africa 377
Enzyme defects 376
Enzyme immobilization 204
Enzyme therapy 326
Enzymes, Isolated 281
Epel, David 327
Epstein, Yokov M. 282
Equatorial current ... 334
Erotic fantasies 26
Erythromycin and
Retin-A 344
Estrogen, Increase in . 23
Estrogen fluctuations . 285
Estuarine microbes
Pesticides inhibit .. 7
Ethics
Death and dying 109, 111
Ethiopia
Oldest human fossils 276
Ethyl alcohol,
Interstellar 277
Ethylfluoroacetate 155
Ethynil radical (C_2H) 398
Etzioni, Amitai .. 92, 252
Evans, D. Fennell 348
Ewing, Maurice 72
Excavations,
Eastern U.S. 84
Exhaust gases
Vertical flow 191
Exhibits, Natural
History Museum ... 43
Eyman, L. D. 8

F

FAMOUS ... 87, 118, 119
FDA physicians 22
FSH chemical structure 85
Fabry's disease 326
Fairless, Billy 331
Falcons, Foster parents 360
Falkland Plateau 54
Famine
Fears 53, 54
Food reserves . 312, 340
Grain & livestock .. 19
India 214
Population growth .. 340
Relief 278
U.S. grain options . 372
See: World Food
Conference
Fanselow, J. L. 137
Fantasies, Erotic 26
Far-infrared source 398
Fast Flux Test Facility 13
Fat-fiber link 379
Fatty acid placement . 169
Fault tree analysis ... 117
Faust, C. H. 253
Fauve, Robert M. 373
Federal Energy
Administration 374
Federal R&D funding . 71
Feeny, Paul 73
Ferguson, Bruce B .. 286
Fermilab 228
Installations at . 298-300
Particle physics 364-367
Tagged Photon
Laboratory 324
Ferrari, Alfred 391
Ferris, Benjamin G. .. 155
Ferrusquia, Ismael .. 247
Fertility control, Male. 164
Fertilization 327
Fertilizer
manufacturers 296
Fetal protein 57
Fetus, Immune system 373
Feynman, Richard P. .. 68
Fibrous foods 379
Fifth force, Superweak 55
Fighting behavior 285
Fike, Elmer 155
Filipchenko, Anatoly . 359
Finch, Robert 378
Finley, John S. 331
Firby, Jean B. 373
Fish, Mercury uptake . 73
Fish hatching 8
Fisher, Farley 155
Fisher, John C. 171
Flerov, G. N. 164
Fletcher, James C.
21, 26, 198
Flooding,
Supercollossal 250, 251
Flory, Paul J. 245
Flu vaccine spray 381
Flu virus hybrids 383
Fluid mechanics
Wind engineering 188-191
Fluorescent light 342
Fluorine propellants .. 286
Fluorocarbons
Ozone layer 180,
212, 341
Folic acid deficiency . 108
Foner, Simon 228
Food aid options 372
Food conference
See: World Food
Conference
Food for Peace 54
Food from petroleum .. 99
Food reserves .. 312, 340
Food safety
Risk/benefit dilemma 252
Food Security Council. 292
Ford, Gerald R. 4, 221
Energy 213, 295
Food ... 292, 340, 349
Science 100
Solar heating 181
Forensic research 266-268
Fossil denticles 373
Fossil mammal 262
Fossil plants 42
Fossil sites
Baja California 247
Fossils, Genus Homo.. 276
Fothergill, John 85
Franck, James 46
Frazer, A. 331
Freeman, Orville L. ... 292
Freeman, S. David 259
Freireich, E. J. 149
Friedlander, M. W. ... 398
French-German probe .. 36
Freon products 180
Data sought 341
Frightening objects .. 301
Frost nip 263
Frustrations 283
Fundamental constants
317, 319
Fusion, Controlled
Superconductivity .. 228
TCT plasmas 279
Fusion, Laser-induced
LLL's model .. 106, 107
Optimum light waves 72
Reflectivity 72
Fusion power
Shock waves 287

G

GATE 332-334
GAW-1 superwing 153
Gaillard, Jean A. 373
Galactic center
Ethyl alcohol 277
Galaxies
Origin of life 124
Galaxy NGC 1068 150
Gallbladder therapy .. 169
Gamma-ray spectrum .. 56
Gamow, George 319
Gangliosides 248
Gangrene toxin 316
Ganymede, Electrical
charge 356
Ganz, Alexander 56
Gardiner, Cecil C. Jr. . 29
Garrett, James B. 378
Gas-core reactors 362, 374
Gasoline consumption,
U.S. 246
Gaucher's disease 326
Gault, Donald B. 196
Gehrels, Tom 356
Gehring, Perry G. 71
Gehrs, C. W. 8
Geier, Mark R. 5
Gelfand, Donna 283
Geller, Uri 46
Gene, Artificial 180
Gene disorders .. 39, 326
Gene isolation 277
Gene therapy 5
Gene transplant ... 52, 53
Genes
Constant and
variable 254
Mapping 89
Genetic coding 253
Genetic engineering
Bacterial genes 180
Clashing views 277
Phage lambda 293
Geodesy experiments. 377
Geology, Interplanetary 250
Geophysical
correlations 233
Geothermal energy
Japan 217
Resource areas, U.S. 28
Germany's space
efforts 36, 74, 393
Geweniger, C. 55
Geyer, Robert 203
Gezari, D. Y. 132
Ghiorso, Albert 164
Giacin, J. R. 330
Giaever, Ivar 171
Giambra, Leonard M. . 376
Giardini, A. A. 8
Gibberellin role 57
Giberson, Gene 197
Gibson, Andrew E. 295
Gibson, Edward 153
Gibson, Gary G. 331
Giessen, Bill C. 267
Ginzburg, V. L. 317
Gjesdal, S. 55
Glass laser, Solid-state 107
Glaucoma prodrug ... 184
Glebatis, Donna M. .. 261
Gliedman, Marvin L. .. 315
Global cooling 399
Global Nutrition
Surveillance 292
Glomar Challenger
Funneling drill 69
Leg 36 54
Leg 37 ..... 69, 70
Leg 38 231
Glucocerbrosidase 326
Glucose into fructose . 204
Glucose transport
inhibitor 165
Glutathione depletion . 71
Golasso, George 381
Golden Valley
Formation 42
Goldberger, Robert ... 389
Goldhaber, Alfred S. .. 56
Goldhaber, Gerson ... 324
Goldich, Samuel S. ... 358
Goldman, Patricia S... 310
Goldmark, Peter C. ... 246
Goldring, Gwirol 356
Goldstein, Joseph L. .. 22
Goldstein, Richard ... 134
Goldstone antenna
Radar reflectivity .. 134
Goldwasser, Edwin L. . 228
Gondwanaland 54
Good, Robert 373
Goodale, James G. 363
Goodman, Robert 286
Gospodaarowicz, Denis 89
Gotschlich, Emil C. .. 381
Gott, J. Richard III.. 390
Grain, U.S. options .. 372
Gramicidin S 281
Grant, James 54
Grant applications
Disclosure 262
Gravitational wave ... 169
Gravity, Big bang and
big numbers 317
Weakening 116, 117, 319
Gravity waves
Project da Vinci ... 182
Gravitz, Melvin 359
Great Dismal Swamp . 316
Greden, John F. 9
Green Revolution 218, 312
Greenberg, O. W. 8
Gribbin, John 197
Gronwall, D. 216
Gross, Ludwik .. 285, 327
Gross, R. L. 108
Group dynamics
Watergate analysis . 378
Grumet, F. Carl 248
Gschwind, C. R. 149
Guenther, George C. .. 23
Guilmet, Daniel 314
Gunn, James E. 390
Gursky, Herbert 121
Gutterman, J. U. 149

H

HEAO 130, 131, 330
HEAO-1, 2, 3 88
HL-A matching .. 314, 315
Haddox, Victor 104
Hadrons 103
Internal structure .. 364
Hadron-hadron interactions 56
Cosmic rays 56
Hagenmaier, Hans E. . 40
Hall, Charles 308
Halothane exposure . 103
Hamilton, Robert 198
Hamsters 199
Han Dynasty tombs .. 152
Handler, Philip 4, 166, 278, 292
Interview 58, 59
Hanington, Edda 85
Hanna, M. G. Jr. 149
Hannay, N. Bruce 70
Hardin, Garrett 340
Hardy, John 133
Hardy, Kenneth R. .. 152
Harington, Norman .. 149
Hariton, E. Barbara .. 26
Harrell, John 75
Harris, Robert 311
Harwit, Martin 150
Hashida, Kunihiko ... 93
Hasted, John 46
Hastings, J. Woodland 156
Hausmann, A. Carl Jr.. 106
Hawkins, S. W. 124
Hayhoe, Mary 230
Head injuries 216
Health care programs . 37
Health research ... 38, 39
Hearing loss 280
Hearing mechanics ... 37
Heart-disease prone .. 151
Heart implant, Second 358
Heart transplants 314, 319
Heaton, Kenneth W. .. 379
Heckel, Edgar 286
Heckler, Political 301
Hedge, Carl E. 358
Heeschen, David S. .. 126
Heffley, James D. 344
Hefner, Robert E. Jr. . 71
Heis'erkamp, David .. 247
Helios sun probe 9, 36, 74, 75, 130, 393
Helium-neon laser 37
Helium-xenon mixture . 229
Hellegers, Andre 53
Helmick, H. H. 229
Hendry, Lawrence ... 343
Hercules X-1 287
Heroin use 26
Hersh, E. M. 149
Herzog, Allen N. 282
Heterodyne receiver .. 135
Hevin, Brigitte 373
Hewish, Antony 244
Heydenreich, Ludwig H. 236
Hickey, Leo J. 42, 43
Hift, Walter 108
Higgins, G. H. 28
High Energy Astronomy Observatory .. 130, 131
High-energy physics FermiLab 364-367
Depends on superconductivity 228
Hill, David A. 69
Hill, Henry A. 390
Hindenlang, David 343
Hindley, Henry 234
Hink, W. Fred 88
Hinman, Alan 199
Hodgkin's disease 285
Hogness, David 52
Holland, Gerald F. 184
Holland, Joshua 332
Holt, Stephen S. 215
Holton, Gerald 92, 93
Holtzman, Neil A. 139
Holzman, Philip S. ... 104
Homo fossils Four million years.. 276
Homozygotes 22
Honjo, Tasku 253
Hoover, Richard B. .. 183
Hormones, Exogenous 261
Hormones, From plants 343
Hornet, Modified 358
Hospital infections ... 199
Hospital pathogens 44, 45
Hospitalized patients . 91
Hotchin, John 199
Houck, J. R. 150
Howard, J. H. 28
Hoyle-Narlikar theory 116
Hubbard, William 186
Hufnagel, Charles 314
Hulet, E. Kenneth 164
Hulse, Russell A. 245
Human gene therapy . 5
Humanness of human species 346, 347
Hume, David 314
Humphrey, Hubert 340, 349
Humphrey, N. K. 301
Hunten, Donald M. 213, 341
Huson, Russell 365
Huygens, Christian ... 235
Hydrocarbons, Marine life 331
Hydrofluoric acid 286
Hydrogen fuel 269
Hydrogen slush 287
Hydronuclear system . 217
Hyman, Allen I. 109
Hyperalimentation . 90, 91
Hypnosis, Acupuncture 359
Hypothalamic factors . 57

I

IMP Satellites .. 372, 390
IQ tests 168
IUD Dalkon Shield ... 22
Ice Age people Eastern sites, U.S. . 84
Ice sheet, Deteriorating 344
Identification Forensic research 266-268
Racial bias 168
Ikle, Fred C. 185
Illegitimacy rates 6
Illingworth, Ronald ... 73
Immune response genes 89
T cell markers 248
Immune system 388
Cancer cells 373
Mother's diet 108
Plants 286
Immunization Synthetic antigens .. 383
Immunoglobulin chain 253
Immunologic rejection 314
Immunotherapies 150
Indian astronomers ... 252
Infants, Newborn PKU screening 139
Infections Hospital-acquired 44, 45
Inflation psychology .. 168
Information storage .. 296
Infrared astronomy .. 135
Far-infrared 398
Mira's cycle 150
Ingersoll, Andrew 186
Insect armor 316
Insect classification ... 343
Insect control Sex attractants 343
Tissue cultures 88
Insulin therapy 216
Intasat A 246, 342
Intelligence Aspect of behavior 168
Intelligence gathering . 105
Interferometry Earth's crust 136
Geodesy by 377
Speckle 132, 133
Interferon Two chromosomes . 89
Interferon inducer ... 69
Interstellar Dimethyl ether 102
Ethyl alcohol 277
Infrared observations 138
Oscillatory structure 103
Intoxication, State of . 232
Intravenous feeding 90, 91
Inventions, Federal ... 70
Inventions, Han, Tang. 395
Io, Jupiter's 187, 356
Ion oscillations 156
Ion solutions 348
Ionosphere, Heated ... 393
Ions, Egg cells 327
Iran, ERTS station ... 330
Irrigation, Climate 41
Israeli science .. 357, 358
Iyer, H. Mahadeva ... 392

J

J (or psi) particle 324
J-XIII 195, 279
Jacob, Francois 373
Jacob, Hedwig 373
Jaeger, Richard 220
Jaeger, Rudolf J. . 71, 155
Jaegle, P. 296
Janerich, Dwight T. ... 261
Janis, Byron 46
Janis, Maria Cooper .. 46
Japan, Geothermal power 217
Jay, Dixie L. 88
Jaynes, E. T. 61
Jeffereys, Harold 72
Jefferson, Thomas 70
Jefferts, K. B. 103
Jenkins, Farish A., Jr. 262
Jensen, Reed J. 21
Job satisfaction 363
Johanson, D. Carl 276
Johnson, Francis S. .. 213
Johnston, Harold S. .. 213
Jolley, R. J. 8
Jones, Lloyd 36
Jupiter Atmosphere .. 187, 375
Electrons 356, 375
Galilean satellites . 356
Helium/hydrogen .. 150
Interior 186, 227
Magnetic field 187, 356, 375
Pioneer 11 356, 357, 375
Poles 308, 356
Protons 357
Radiation belts. 308, 356
Radio bursts 375
Red spot 186, 357
Temperature 375
Thirteenth moon 195, 279
Unmanned mission .. 26
Weather 186, 187, 375
The Jupiter Effect 197, 198
Jurdy, Donna M. 72

K

K-meson decay 55
K mesons, Cross sections 20
Kahn, C. Ronald 248
Kaiman, Gabor 296
Kamimoto, Toshiharu . 203
Kantner, John F. 6
Karlin, Robert A. 282
Katona, George 168
Kattawar, George W. . 216
Katz, Jordan 103
Katz, Sidney A. 169
Keeble, G. R. 301
Keeney, R. R. 184
Kelleher, John 344
Kelleher, Thomas F., Jr. 266
Kellett, Claud M. 127
Kelley, Clarence 266
Kerr, Frank J. 214
Keyes, Gilbert 198
Keynes, John Maynard 245
Khorana, Har Gobind . 180
Kidney transplant Bubbling antibodies 314
Fluorochemicals ... 203
Kilbourne, Edwin D. . 383
Killian, James R. 4, 58, 59, 100
Kim, I. J. 169
Kimball, Frances 23
Kinch, William 199
King, James Jr. 26
King, Jan 342
Kirillin, V. A. 280
Kissinger, Henry 105, 278, 292
Klauber, Gary 260
Klein, Herbert 378
Klein, Jerome O. 119
Kleinknecht, K. 55
Klemm, W. R. 232
Klyore, Arvydas 375
Knacke, R. F. 150
Knox, Keith 132
Koestler, Arthur 46
Kohl, John 390
Kossoff, R. M. 40
Kowal, Charles .. 195, 279
Krimigis, Stamatios ... 390
Kristensen, Thorkil ... 312
Kritchevsky, David ... 379
Krupke, William 107
Krylov, V. N. 72
Kubasov, Valeriy 55
Kulpa, Charles F. 232
Kumeda, H. 213
Kundsin, Ruth B. 44, 45
Kunow, H. 393
Kusch, Polycarp 60

L

LMFBR 344
Labeyrie, Antoine 132
Lactose operon system 180
LaForce, Edward 358
LaForce, Robert 358
Lagrangian points 183
Lahren, Larry 230
Lake Missoula 250
Lake Superior 331
Lambsquarters 252
Lana, Chimpanzee 376
Landa, Frederick 342
Landsteiner, Ernest .. 314
Langford, R. E. 8
Lansdell, Herbert 359
Lao Tzu 152
Lapp, Ralph E. 117
Large Solar Observatory 130
Large Space Telescope 130, 131
Larsen, Poul 57
Larsen, Rudolf R. 324, 341
Laser fusion Improved pulse 21
Optimum light waves 72
Reflectivity 72
Shock waves 287
Laser-fusion power 106, 107, 111
Lasers Aluminum into plasma 296
Feedback injection . 296
Gun markings 266
Lidar 399
Reaction-powered .. 229
Lasker Awards 245
Lasker Awards 1974 .. 327
Lava, Molten Heat-transfer 72
Lawrence H. Sherwood 139, 388
Laws, D. R. 199
Lazarus, Al 196
Lead concentrations .. 215
Lead-molybdenum-sulfur 228
Lead 207 and 208 164
Leakey, Louis S. B. .. 276
Leakey, Richard 276
Learning defects 103
Leaves, Vein pattern .. 42
LeBlond, Robert D. .. 8
Lectin 57
Leder, Philip 253
Lederhouse, Robert C. 73
Lee, T. D. 102
Lee, Y. Y. 324
Left-handedness .. 220-222
Legumes 219
Leloir, Luis F. 293
Lemcke, Kurt 377
Leonardo da Vinci Madrid Codices . 234-236
Leonov, Aleksei 55
Lepore, Paul D. 149
Lepton mass 8
Leptons FermiLab 364, 365
Finite size 8
Hadron/hadron 20
Lerner, Michael 151
Lesch-Nyhan syndrome 376
Leukemia Immunization 285
Leukemia, Acute 149
Levine, Bernard 89
Levine, P. H. 149
Levy, Leo 282
Levy, Walter J. 101
Lewin, Walter H. G. .. 311
Li, C. H. 85
Li, Chohluh 358, 359
Lichtler, William F. .. 316
Lidar, Monitoring 399
Life, Origin of Earth-moon system . 216
Light Biological effects .. 342
Biological rhythms . 156
White blood cells .. 310
Light waves, Harmonic 72
Lightning-fighters 41
Ligon, J. David 41
Limb-reduction effects 262
Lipid Research Clinics 38
Lipsky, Ann 285
Liquids, Breathable 193, 202
Lithium deuteride 72
The Lives of a Cell .. 77
Lloyd, William 149
Lockheed WP-3D Orion 152
Longevity, Caucasian . 101
Lorazepam 247
Lough, R. Gregory 40
Lougheed, R. W. 164
Love, Robert E. 301
Lovelock, James E. 213, 341
Lundberg, Anders W. . 28
Lung abnormalities 204
Luria, Salvador 221
Luth, V. 55
Lynds, Roger 132, 389

Mc

McCann, William 344
McCarthy, Ray 341
McClellan, John A. 70
McClure, David A. 184
McConnell, J. V. 76
McCormmach, Russell 92
McDonnell Center for the Space Sciences . 362
MacDoran, Peter F. .. 136
McElroy, Michael B. 212, 341
McGarrity, Gerard J. .. 44
McGinnis, Richard F. .. 344
McGovern, George 349
McGowan, Carl 262
McKnight, G. Stanley . 398
McLaughlin, John 88
MacLoed, Donald I. A. 230
McNiff, E. J. Jr. 228
McRee, Christine 331
McWright, Cornelius G. 266

M

Mach, B. 253
Macromolecules Nobel Prize 245
Madrid Codices 234
Magma energy ... 72, 392
Magnetic fields Critical strength .. 228
Jupiter's . 187, 356, 375
Planets, Saturn 372
Magnetic separation . 399
Magnets, Superconducting .. 228
Malaczuk, N. 252
Male sex hormone .. 85
Malek, Frederic V. .. 23
Malik, Jacob A. 280
Malnutrition, Early Effects on behavior. 331
Prenatal, postnatal . 229
Malpass, Roy S. 168
Mamedov, Rustan 102
Mammalian RNA's 398
Mammoth hunters 230
Manabe, Syukuro 152
Manatees & dugongs .. 204
Manchester, R. N. 8
Mandel, Leonard .. 60, 61
Manganese and iron . 87
Mankind at the Turning Point 269
Mantle plume 105
Maran, Stephen P. 150
Marei, Sayed A. 292, 326, 349, 351
Marijuana use Cinflicting reports . 360
Legal status 360
Marine fossils 247
Marine mammals protection 204
Mariner 10 Extra flybys 197
Mercury's polar region 196
Sunside pass 9
Uncontrolled oscillation 167
Mars Radar profile 134
Marshall, John J. 286
Marston, Richard 108
Marston, Robert Q. .. 389
Martian channels 251
Martin, Edwin 54, 326, 351
Masers, Celestial 135
Mason, Thomas J. 89
Mathematics, Theory of catastrophes 166
Marthur, Krishnan D. . 252
Matthias, B. T. 228
Mavligit, G. 149
Maxwell, Arthur E. ... 119
Mead, Margaret 292
Meadowcroft site 84
Mechanical devices 234-236
Medawar, Peter 92
Medical ads 331
Medical schools 55
Medvedev, R. N. 72
Medvedev, Zhores A.. 101
Mellett, James S. 86
Melson, William G. ... 69
Melton, Charles E. .. 8
Membrane, Man-made 348
Membrane Clock model 156
Membrane gangliosides Role in disease 248
Mendel, Gregor 73
Mendels, J. 331
Meningitis vaccine ... 381
Mental hospitals 198
Mental sharpness ... 285
Mercury (Planet) Caloris Basin 196
Core 196
Infrared spectrum . 150
Magnetic field 196
Polar region 196
Sunside pass ... 9, 167
Mercury, Organic 232
Mercury conversion .. 73
Merigan, Thomas C. .. 69
Meroney, Robert N. .. 189
Merrill, Carl R. 5
Mesarovic, Mihajlo ... 269
Meson spark 56
Meson factory 365
Mesothelioma 204
Messier 13 message .. 325
Mestecky, Jiri 9
Metal bending 46
Meteoric impact 233
Meteoroid Technology Satellite 399
Methylmercury in fish. 73
Methylmercury levels . 232
Meyers, Sheldon 13
Microbial ecosystems .. 7
Microfibril synthesis .. 293
Mid-Atlantic Rift Deep drilling 69
FAMOUS 118
Mineral deposits ... 87
Migraines, MAO 85
Miles, D. Howard 286
Milgram, Stanley 283
Millspaugh, Peter 23
Milton, Daniel J. 251
Minerals, Sea-floor ... 87
Minnesota rocks 358
Minority grants 71
Mira's cycle 150
Misner, Charles W. 124
Mitchell, Ralph 7
Mizejewski, Gerald J. . 57
Mody, Naresh V. 286
Molina, Mario J... 181, 212
Mollusc denticles 373
Monaco, Anthony 314
Monod, Jacques 180
Monson, Richard 89

Moon, Gravity map .. 391
Moore, Elizabeth C. .. 185
Moore, John A. 92
Morgane, Peter J. 229, 230
Morris, George 134
Morris, Leo 6
Morris, Robert 167
Morris, Robert L. 101
Morris, William 247
Morse, Frank 31
Morton, Rogers C. B. 248, 295
Mosher, Charles A. .. 100
Moss, Frank E. 198
Mother's milk 286
Motorboats, Oysters .. 331
Mountains, Computer models .. 152
Mud puddles 73
Muller, Richard A. 133, 138
Multiple risk factor .. 38
Mumma, Ralph 343
Munch, Guido 186, 357, 375
Muon/neutron interactions 169
Muons and electrons.. 20
Murphy, Brian 383
Murphy, Sheldon D. 71
Murray, Bruce .. 196, 197
Murray, John 107
Murray, Moreen and Kenneth 293
Muscle contraction .. 245
Muskie, Edmund . 166, 301
Muslimove, Shirali .. 101
Mussels, Hydrocarbons 331
Mycoplasmas 286
Myometrium 23
Myrdal, Gunnar 245

N

NASA
Federal R & D 105
Satellite astronomy 130
Solar heating 181
Soviet biosatellite . 389
Spacelab packages .. 36
NASA and FAA Crashworthiness study 10, 11
NGC 1068 150
NGC 1300 115
NGC 2237 nebula ... 124
Nash, Thomas 324
Nathans, Daniel 52
Nathenson, Stanley G.. 319
National Academy of Sciences
EPA research 183
Gene transplants.. 52
Handler interview 58, 59
Science adviser ... 4
Test-tube babies .. 53
National Assessment of Educational Progress 7
National health insurance 38
National Institutes of Health 389
National Research Council Restructured 59
National Research Defense Committee. 5
National Science Foundation 5
National Weather Service 120
Nau, Marian 253
Navstar Global Positioning System. 27
Nebula photographs. 122
Neodymium-glass lasers 107
Neoprine, Toxic 155
Nerve-cell development 230
Nervous habits 151
Ness, Norman 196
Netherlands Astronomy Satellite 121, 182
Neufeld, Elizabeth .. 39
Neugebauer, Gerry .. 169
Neutral particles 341
Neutral weak currents 365
Neutrino interactions. 365
Neutrino laboratory .. 299
Neutron star 26
Newberne, Paul M. 108
Newborn's vision 229
NewYork-London record 151
Nickel itch 169
Niewoehner, Dennis E. 285
Nigeria Environmental laws 377
Niobium-germanide .. 287
Nirenberg, Marshall .. 389
Nitrogen, Inorganic .. 170
Nitrogen anesthesia .. 232
Nitrogen fixation 219
Nitrogen oxide emission 166
Nitschke, J. M. 164
Nixon, Richard M. 301
Nixon group norm .. 378
Njus, David 156, 157
Nobel laureate Late-blooming 171
Nobel Prizes ... 244, 245
Nobel-gas compounds 8
Nooden, Larry D. 316
Nora, James and Audrey 262
Norman, Barbara 253
North Sea coast 377
Northern seas Glomar Challenger. 231
Norwegian Sea Greenland 231
Nuckolls, John 111
Nuclear acident risk 117, 374
Nuclear energy Centers 13
Infrared gas laser .. 229
Nuclear explosions Ozone layer depletion 185
Nuclear power plants Environmental effects 369
For cold harbors ...217
Rasmussen report . 117, 330, 374
U.S. lags behind ... 317
Nuclear Regulatory Commission 248
Nuclear reactors Breeders 12-15, 259, 374
Gas reactor ... 362, 374
Safety .. 117, 330, 374
Nuclear wastes See: Radioactive wastes
Numerical modeling GATE 334
Nunn, Clyde 92, 252
Nunn, Robert Gregory. 151
Nurmia, Matti 164
Nutrients, Full complement 344
Nutritional disease control 91

O

OSCAR 7 342
Oak leaf roller moth.. 343
Obesity Cell membranes ... 248
Chastity-belt 76
low fiber intake 379
O'Brien, Thomas 56
Occultation, Lunar Moon/Crab nebula . 311
Occultist personality .. 168
Occupational Safety & Health Administration 23, 149
Ocean bottom 119
Ocean current 344
Oceanic food chain ... 170
Ohanian, M. J. 362
Oil prices, OPEC 213
Oil prices, Optimal .. 269
Oil-producing countries 351
Oil shale industry 374
Oil spill clean-up 287
Oke, J. Beverly 390
Oligocene seabeds 247
Oliver, B. W. 325
Omdahl, Jack L. 348
O'Neill, Gerard K. 183
O'Neill, John P. 157
Onsager, Lars 68
Orbiting Solar Observatories 130
Orbits, Equatorial ... 215
O'Regan, Brendan 46
Organ transplants Three decades . 314-319
Organic metals 184
Orion nebula ... 102, 398
Orne, Martin T. 294
Osteoporosis 344
Ostriker, J. P. 169
Ostrom, Thomas M. .. 301
Ousley, Gilbert ... 74, 75
Overload theory Crime rates 283
Oyster culture Hydrocarbons 331
Sewage 170, 171
Ozone, Stratospheric Booster exhausts .. 26
Ozone clouds Rural areas 260
Ozone layer Fluorocarbons . 180, 341
Nuclear explosions . 185
Sky's brightness ... 216
Ozonization Water purification .. 362

P

POPAE storage ring .. 228, 300
Paarlberg, Donald 349
Packard, Richard E. .. 68
Packer, Lester 199
Packman, Symour ... 253
Pain fibers, Specific .. 261
Painter, Neil S. 379
Palade, George Emil 244, 327
Paleontologists cautioned 86
Pancreas, Artificial .. 216
Panusarn, Charoen ... 69
Pao, Jenmin Jih 152
Paranoid behavior 280
Parapsychologist 100
Parenteral feeding 91
Parker, Daniel 309
Parkes 0548-322 398
Parkin, William M. 90
Parlow, Albert F. 85
Particle physics FermiLab facilities 298–300
FermiLab projects 364–367
psi-J particle 324
psi (3700) 340
Rising cross sections 20
Superconductivity .. 228
Superweak interactions 55
Particles of ash 362
Paskewitz, David A. .. 294
Pastan, Ira 248
Patel, I. G. 214
Patel, Vishnu V. 184
Patent applications .. 70
Paternoster, R. 362
Paton, John A. 37
Patterson, Clair C. .. 215
Patterson, Rosalyn M. 5
Pauli, Wolfgang 46
Pearson, Allen 152
Pekeris, Chaim Leib . 72
Pell, Claiborne 280
Pellet fabrication 111
Pendergast, David R. . 376
Penicillin G resistance 119
Peoples, John 365
Peregrine falcons 360
Perfluorodecalin 203
Periera, Joseph N. 184
Perkins, Robert 45
Perlman, David 92
Perlmutter, Johanna .. 22
Personal registers 296
Personal space 282
Pestel, Eduard 269
Pesticides, Exposure to 286
Shell's 86
Pesticides banned 231
Peterka, Jon A. 189
Peters, Charles F. 195
Peters, Vera 323
Peterson, A. Atley 268
Petricciani, John C. .. 5
Phage lambda 293
Phaseolamin 286
Phenylethylamine 85
Phenylketonuria 139
Pheromones 343
Philbrick, Russel 6
Phillips, Leo A. 398
Phillips, T. G. 103
Photoelectric effect .. 61
Photon, High-energy .. 365
Photon, Massive 296
Photons Optical 60
Spacelike 103
Ragged 324
Photoreactivating enzyme 310
Photorespiration 219
Pi mesons 324
Rising cross sections 20
Pinon pine cones 41
Pioneer 10 Jupiter data .. 186, 375
Payoff 356, 357
Radiation belt 308
Pioneer II Around Jupiter 187
Ganymed's passage 356
Jupiter's magnetic field .. 375
Jupiter's poles 308, 356
Slingshot path 356, 375
Saturn 372
See also: Jupiter
Piper, Joyce M. 261
Pitcher plant 286
Pitts, James N. 213
Pituitary hormone OGF 89
Placental cells Immune system ... 373
Plagemann, Stephen .. 197
Planck, Max 60
Planets Atmospheres 138
Magnetic fields 372
Reflectivity ... 134, 135
Plant adaptations 104
Plant cancer 41
Plant cells Repair 104
Wall material 293
Plant scientists.. 218, 219
Plants Carnivorous 286
Chlorophyll mutations 104
Immune system 286
In autumn 316
Pheromones from .. 343
Roots and shoots .. 57
Seed exchange 104
Suicide physiology .. 316
U.S. endangered 204
Wound repair 104
Plasma energy 229
Plasmas for fusion .. 279
Plasmid engineering . 277
Plasmid hazards 293
Plass, Gilbert N. 216
Plastics Carcinogenic .. 71, 154
European conference 40
Health hazard . 145, 154–157
Nutritious 330
Toxic ingredients .. 154–157
Workers' diseases 89, 154
Plata, E. J. 149
Plate interfaces 344
Plate tectonics .. 72, 344
Plates, Plumes 105
Platinum-rhodium wire. 74
Plutonic rocks 69
Plutonium safeguards 13
Pneumonia vaccine .. 381
Pockels effect 133
Polan, Adele K. 285
Polar bears 204
Polar wandering 72
Political heckler 301
Pollutants sampling .. 260
Pollution control Polls support 139
Toxic concentrations 362
Pollution levels 166
Poly(A) handles 398
Polyunsaturated cattle feed 169
Polyurethane foams .. 154
Pomeranchuk, Isaak Ya. 20
Pontious, Charles E. 362
Popovich, Pavel 22, 37, 55
Popovic, Vojin 360
Popp, Carl J. 73
Popper, Hans 89
Population, Global Underestimated ... 377
Population density ... 282
Population growth 312, 340
Poston, Tom 167
Pottery, 4000 B.C. 395
Power plants, Ozone . 260
Waste water 399
Prairie flora, Authentic 299
Preer, James R. 252
Pregnancies, Teenage . 6
Pregnancy test 261
Pregnant women Diet affects fetus .. 108
Halothane exposure 103
Premarital intercourse 6
Presidents, Left-handed 221
President's science advisers 4
Presser, G. 55
Price, Don K. 92
Price, Gay H. 282
Prisoners' rights 151
Productivity Nine "action levers" 363
Professional standards 38
Project ALADDIN '74 . 6
Project da Vinci 294
25 experiments 182
Project FAMOUS Continental drift ... 118
Crustal accretions 87
Project Independence FEA report 374
Project Ozma 325
Project Skywater 233
Project Stormfury ... 152
Proofreading, Computerized 167
Propane-diamine 69
Propionitrile 155
Prostaglandin receptors 23
Protein deprivation .. 108
Prenatal and postnatal 229
Protein production, World's 340
Protein resonance 57
Proteins From microorganisms 40
Invading bacterias . 286
Proteoid root formation 252
Protestants, Scientists. 152
Proton-proton collisions 20
Proton ring, FermiLab 299
Protons, Quark theory 364
Protoplast fusion 219
Protostars, Group of . 169
Protozoan ecosystem . 77
psi-J particle 324
Psi powers in animals 100
Psychiatrists State institutions .. 198
Psychic research 100
Psychokinesis 46
Public housing 56
Public opinion polls .. 139
Pulsars Binary system 245
Nobel Prize 244
PSR 1133+16 8
"Wisps" 311
Puppis A, X-rays . 26, 182
Pyrimidine dimers ... 310

Q

Qasba, Pradman K. .. 5
Quantum electro-dynamics (QED) . 61, 61
Quantum mechanics Macroscopic effects 68
Quark, Charmed 341, 367
Quark-proton theory . 103
Quark theory 364-367
Quasar 3C 273 116
Quasars, Nearby 398
Quimby, Kelvin L. ... 103

R

R Aquilae 150
RAE-2 satellite 372
R&D Funding analyses .. 105
In Israel 357
Project Independence 374
REM sleep 376
RNA tumor viruses .. 398
RTAC mirror 133, 138
Racial bias 168
Radar reflectivity 134
Radiation therapy ... 232
Radio astronomy Arecibo rededication 309
Geodesy by 377
Satellites hampering 214
Saturn signals 372
VLA Y-shaped array. 126
Radio astrophysics Nobel Prize 244
Radio bursts, Jovian . 375
Radio emissions Saturn 372
Radio sources Biggest 165
Edge of universe .. 136
Radio telescopes Global network 153
Largest antenna ... 125
Orbiting 131
VLA Y-shaped array 126
Radioactive wastes AEC response 31
EPA report 374
Gas core reactors . 362
Sealed in glass ... 217
Short-term, long-term storage .. 15, 374
Radiocarbon dating .. 84
Rainfall levels 40
Ralph, James R. 71
Randolph, Jennings .. 166
Randt, Clark T. 331
Rank, David M. 135
Rasmussen, Norman C. ... 117, 330
Rasmussen report ... 117
Criticism of .. 330, 374
Raul, David P. ... 71, 157
Raven, Bertram H. .. 378
Ray, Dixy Lee .. 117, 295
Raynaud's disease ... 263
Reactor-powdered laser 229
Recombinant experiments 52, 53
Recorder, Solid-state . 362
Redshifts 116
Reed, Nathaniel P. 40
Reed, R. A. 150
Refined foods 379
Reflectivity, Planetary 134, 135
Reflectivity of light .. 72
Reich, Charles 92
Reichley, Paul 134
Reid, J. V. O. 108
Rennie, Donald W. ... 376
Research, Ban on . 52, 53
Research fakery 388
Research grant applications 262
Resnick, Oscar .. 229, 230
"Responsiveness program" 23
Retin-A 344
Review of the Year . 402-406
Rhine, J. B. 100
Rhizobia's specificity . 57
Rhoads, Jonathan E. 90, 91
Rhode, C. Martin 90
Riboflavin 342
Rice "IR-26" 218
Richardson, Gregory . 287
Richter, Burton 324
Ricker, George R. Jr. . 311
Right to treatment .. 198
Ring nebula 113
Ringertz, Nils 277
Ringler, Robert 38
Ripley, S. Dillon 56
Robbins, John B. 381
Robeck, Gordon G. ... 311
Robins, Lee 26
Robinson, Jean M. 9
Roblin, Richard 52
Robot, Semi-autonomous .. 263
Rock engraving 346

Rocket nozzle 263
Rockson, Stanley 376
Rocky Mountains 42
Rod monochromats .. 230
Rome Forum 292
Rose, David J. 92
Rosenbaum, Jerry L. . 184
Rosenfeld, Stephen .. 388
Rosomoff, Hubert L. .. 261
Ross, Sydney 119
Roszak, Theodore ... 93
Rousseau, Jean Jacques 346
Rowe, Brian H. 330
Rowe, W. D. 374
Rowland, Frank S. 181, 212, 341
Rowlett, Hugh 344
Rubber dam, Inflatable 287
"Rubber" telescope .. 132
Ruiz-Herrera, Jose .. 293
Rukavishnikov, Nikolai 359
Rummo, Nicholas 148
Rumsey, Howard 134
Runcorn, S. Keith ... 72
Runge, Paul 310
Ruppe, Harry 75
Rural-urban migration 246
Russell, William O. .. 248
Rust, Bert W. 117
Ryle, (Sir) Martin 244
Ryther, John 170

S

SMS satellite ... 214, 333
SPEAR storage ring .. 340
SR-71, Lockheed-built 151
Sadeh, Willy Z. 189
Sagan, Carl 325
Salton Trough 28
Salyut/Soyuz Docking practice .. 22
Salyut 3 ..... 37, 55
Samuels, Sheldon ... 155
San Andreas Fault Likely earthquakes . 198
VLBI check 136
San Marco Launch Facility 215
Sanborn, V. A. 189
Sandage, Allan 390
Sandler, M. 95
Sandorfy, Camille 23
Sands, Tagged 377
Sarfatt, Jack 46, 78
Satellite astronomy Large space Telescope .. 130, 131
Satellite navigation ... 27
Satellites
AERO-2 36
ANS 121, 182
ATS-6 214
Ariel-5 215
Atmosphere Explorer C 6
Azur 36
Commercial 246
Dutch-built ... 121, 183
ERTS 88, 330, 342
HEAO 88, 130, 131
Helios 74, 130
IMP-6 372
Intasat 246, 342
LSO 130
MTS reactivated ... 399
OSCAR 7 342
OSCAR-B 246
OSOs 130
RAE-2 372
Radio astronomy .. 214
SAS-2, 3 215
SMS-1 ..... 214, 333
San Marco II, III ... 215
Small Scientific ... 215
TIMATION I 27, 83
UK-5 .... 121, 214, 215
Uhuru 130, 215
Westar II 246
Saturn 308
Magnetic field 372
Radio emissions .. 372
Saturn's rings .. 134, 135
Savino, John 344
Savit, Robert 103
Sawhill, John C. 213, 295, 358
Sbar, Marc L. 105
Scala, James 379
Scandium 45 377
Schaak, D. F. 150
Schaefer, Joseph T. .. 105
Schafer, Rollie 73
Schaff, Charles R. 262
Schedl, Harold P. 348
Scheidt, Frederick J. . 168
Scherrer, Karl 277
Schickedanz, Paul ... 41
Schiffer, M. S. 119
Schinke, Robert T. .. 398
Schistosomiasis 377
Schizophrenia Predicting 104
Random proneness . 152
Schmidt, Alexander M. 22
Schmidt, Edwin L. ... 57
Schneider, Louis 348
Schneider, R. T. . 229, 362
Schneidermann, Arthur 132
Schneiderov, Anatol J. 307
Schnopper, Herbert . 121
Schramm, David N. .. 390
Schreyer, Susan L. .. 316
Schrohenloher, Ralph E. 9
Schulenberg, Ray 299
Schwartz, Gary 263
Schwatters, Roy F. ... 324
Schwenk, Francis C. .. 229
Science Basic 58
Graduates 59, 153
Improprieties 23
Israel 357, 358
President Ford 100
Project da Vinci 182, 294
Public confidence .. 252
US/USR 280
Science and its Public. 92
Science education 7
Science grants .. 105, 262
Science piracy 262
Science writers Minority grants 71
Scientific meetings .. 46
Scientist-underachievers 73
Scientists
Auto-regulation 53
Employment rising . 105
Israeli immigrants . 358
NIH 389
Protestants 152
Public information . 13
Sclerotization 316
Scott, Andrew 316
Scott, Judith 45
Scrap metals 399
Sea-floor minerals .. 87
Sea-floor spreading .. 118
Sea otter 204
Sea snakes 204
Seaborg, Glenn T. 164
Seashore erosion Tagged sands 377
Seed exchange, China. 104
Segal, Irving E. 117
Seinfeld, John 166
Seismic belt 105
Seizures 230
Sela, Michael 383
Selikoff, Irving J. . 89, 204
Serebryakov, V. A. ... 72
Settle, Dorothy 215
Sewage-aquaculture .. 170
Sewage treatment Algae, oysters 170
Fish hatching 8
Sewage waste chemotaxis 7
Sex attractants 343
Sex-dependent development 310
Sex hormone TSH 85
Sex offenders 168
Sexual behavior 73
Sexual fantasies 26
Sexual psychopaths .. 151
Seymour, Roger S. 204
Shaffer, James G. 45
Shannon, James A. 389
Shapiro, I. I. ... 319, 377
Sharbaugh, Robert J. ... 315, 319
Sheehan, John G. 392
Sheepmaker, Anton .. 311
Shell Co. pesticides .. 86
Shettles, Landrum B. 53
Shock waves 287
Shoemaker, Eugene .. 391
Shome, Basudev 85
Shoplifting reported .. 283
Shotland, R. Lance .. 283
Shultz, George 4
Shumway, Norman A. . 314
Shuttle exhaust gases 26
Sickle-cell anemia 3
Siek, Robert 31
Sigel, R. 287
Sikora, Edward 199
Silberberg, Alan 73
Silberman, Lawrence . 23
Silbert, Earl J. 360
Silicone oil breathable 302
Silverstein, R. M. 73, 343
Simmons, Henry E. .. 38
Simmons, Sam 88
Simon, William E. 213
Simons, Vera 182
Simpson, Joanne 333, 334
Simpson, John 375
Sinaki, Mehrsheed 344
Singer, Jerome L. 26
The Sinister Child 220
Sizov, V. N. 72
Sjogren, William 391
Skin aging 213
Skin cancer Ozone depletion 181, 341
Self-prevention 310
Skin-nickel interactions 169
Skipper, Howard E. .. 327
Skunk's scent 232
Skylab, Solar probes . 130
Slayton, Donald 55
Sloan, Lloyd R. 301
Sloan, M. J. 86
Sloviter, Henry A. 203
Smith, Chauncey 76
Smith, Edward 375
Smith, James R. 199
Smith, Robert B. 105
Smithsonian owls 56
Smoke pollution 216
Smoke stack height 191, 217
Smokers High COHb levels .. 148
Smokers, Young Bronchiolitis 285
Smoking and alcohol . 39
Smoking hazard Pneumonia in children 376
Snake River 105
Snowfall stimulation 233
Snyder, L. E. 102
Söderblom, Rolf 287
Sodium, Molten 12
Sodium chloride 232
Sodium ions 73
Soil heating 399
Soil microbes 252
Sokolov, V. D. 72
Solar cell 263
Solar energy 269, 374
Five-year project ... 181
Solar eruption 122
Solar Heating Act NASA, HUD, NBS .. 181
Solid-state recorder .. 362
Sorghum, White spray 41
Souers, Clark 111
Soule, Harvey 12
Sounding rockets ALADDINS 6
U.S.-British 26, 182
Southern Ocean current 344
Southeast Asia 372
Soyuz 14 ..... 23, 55
Soyuz 16 359
Space habitats 183
Space program 94
Enthusiasm 51
Space shuttle 21
Environmental effects 26
Spacelab 36, 130
Spaceport, Seagoing .. 215
Space-science research 362
Space transportation . 362
Spaepen, Moniek 45
Spray vaccines 380
Spawn membrane 40
Speckle interferometry 132
Spectroscopy, Infrared 135
Sperm control agent . 165
Spicer, Herb 11
Spiegel, John P. 198
Spiegelman, Sol 327
Spinal cord pain 261
Spying Science, survival and 105
Stachnik, Robert 132
Stafford, Thomas 55
Stahman, Ralph 358
Stamm, Walter 44
Standley, Kay 348
Stanhill, G. 41
Star, Collapsing 169
Star cluster 295
Star formation 138
Starikov, V. D. 72
Stars 50, 129, 201, 258, 329
Betelgeuse 389
Mira and R. Aquilae. 150
Starzl, Thomas 315
State Department 372
Steen, Lynn Arthur 166
Steffen, P. 55
Steigerwald, Bernard J. 148
Stein, Wayne 150
Steinberger, J. 55
Steinhardt, Richard A. 327
Steinhart, John S. 340
Steptoe, Patrick 37
Stern, Warren .. 229, 230
Stevens, Donald 228
Stever, H. Guyford 4, 100, 280
Stewart, Richard D. .. 148
Stock market cycles .. 166
Stoien, James D. 342
Stolarski, Richard S. 181, 212
Stone, Alan 198
Stone, Robert ... 372, 389
Stone Age art 347
Stratosphere 341
Streak camera 111
Stress control 151
Strom, R. G. 165
Strom, Robert 196
Strom, Terry 315
Stuart, Richard B. 76
Stuckenrath, Robert .. 84
Submerged land 54
Sudbury Basin 233
Sudden infant deaths Preventing 199
Suinn, Richard M. 151
Sulfur dioxide 217
Sulfur removal 139
Sulzman, Frank M. 156
Sun Probe .. 74, 130, 393
Sunbathing 311
Sunset colors 216
Sun's oblateness 390
Sunwatch, 24-hour 153
Superconducting cable 300
Superconducting film 287
Superconducting magnet 228
Superfluid helium 68
SuperHILAC 164
Supernovas 117
Supersonic aircraft .. 151
Superwing GAW-1 153
Sutherland, Betsy M. . 310
Sutherland, John C. .. 310
Suzuki, D. T. 93
Swallowtails, Mud 73
Swamp, development . 316
Swan, David 253
Swimmers, Women 376
Swinnerton, John W. . 180
Sykes, Lynn R. 198
Symbiosis 252
Synchronous Meteorological Satellite (SMS) .. 333
Synthetic DNA 5
Synthetic vaccines 383
Szabo, Sandor 155
Sze, Nien Dak 212

T

TCV program 9
TIMATION III 27
TOSCA 155
TRH activity 57
(TSeF-TCNQ) 184
TSH chemistry 85
Tagged Photon Laboratory 324
Tagging, Forensic 267, 268
Tai, Ming Hing 150
Taieb, Maurice 276
Tal, Eliezer 357
Taiwani, Manik 231
Tamplin, Arthur 117
Tan, Y. H. 89
Tantalum carbide 311
Taylor, John 46
Taylor, Joseph H. 8, 245
Taylor, O. C. 213
Teague, Olin E. 4
Technological innovations 70
Teenage drinking 39
Teenage illegitimacy .. 6
Telecommunication .. 393
Telescope design 133
Telescopes Anglo-Australian ... 295
Goldstone, Westford 377
Southern Hemisphere 295
Test tunnel 327
Temin, Howard M. 327
Terasaki, Paul I. 315
Terpstra, Theodore B. 152
Test-tube babies Now reality 37
Reaction to 53
Testosterone levels ... 360
Thermal imagery 263
Thermal pollution, Fish 217
Thiokol/Lockhead decision 21
Thom, Karlheinz 362
Thom, René 166
Thomas, J. Kerry 232
Thomas, Lewis 77
Thompson, Hank 185
Thomson, Robert 15
Thuan, T. X. 169
Thunderstorm formation 105
Tibric acid 184
Tidal pools 7
Tiger shark teeth 247
Time, World network . 27
Ting, Ching-yuan 359
Ting, Samuel C. C. 324
Tissue-culture medium 342
Todd, W. Murray 105
Toluene dilsocyanate.. 154
Tong, John E. 285
Tornado track, Longest 342
Tornado-watch episode 120
Tornadoes, Maximum . 152
Torque test 221
Townes, Charles H. ... 135
Toxic concentrations . 362
Toxic Substances Control 155
Toxin formation Tissue-culture 342
Trace analyses, Faulty 215
Train, Russell E. 86, 183, 231, 311
Transfer factor 388
Breast cancer 139
Leukemia immunity 285
Transmission lines ... 287
Transplant surgery Problems abound 314-319
Triage 278, 340, 372
Trichloroethylene 71
Triconodont 262
Trilling, George H. 324
Triticale 219
Tropics, GATE research 332-334
Trowell, Hugh C. 379
Tryptophanyl tRNA 180
Tsu, Lao 93
Tucker, K. D. 398
Tucker, Shirley C. 104
Tumor-inducing factor 41
Tumor suppression 57
Tuna, Lead levels 215
Tuohy, Ian 26, 183
Turner, Ray 105
Tussock moth 185
Two-Component Torus. 279
Type A personality ... 151

U

UK-5 satellite ... 121, 214
US-European Space cooperation . 26
US/USSR Joint projects . 280, 389
Udintsev, Gleb 231
Uhuru satellite 131
Ultraviolet light DNA repair ... 309, 310
Ozone layer 212
Ultraviolet photometer 121
Ultraviolet waves 72
Unified field theory .. 317
Universe, Expanding . 123
Open or closed ... 390
University satellite institutions 59
The Unknown Leonardo 234
Uranium resources 13
Uranium tailings 31
Urban-rural imbalance 246
Urban sprawl, Cost .. 330
Utiger, R. D. 57

V

Vaccine delivery 380, 381
Vaccines, Improved 380-383
Vail, Patrick V. 88
Van, Y. Y. 8
Van Allen, James 375
Van Buuren, Benjamin L. 71
van der Schalie, Henry 377
Van der Voo, Rob ... 72
Van Flandern, Thomas C. ... 116, 319
van Keuren, C. G. M. . 287
Vanucci, F. 55
Vars, Harry 90, 91
Varshni, Y. P. 116, 117
Vecchietti, George 21
Vector mesons 365
Vegetables Wild vs. store-bought 252
Vegetarians 348
Venice, Dam for 287
Venus' craters 134
Venus to sun to Venus 74
Very Large Array. 126, 127
Vetlesen Prize 72
Vianna, N. J. 285
Vieth, Wolf R. 204
Vietnam veteran, Drugs 26
Villarreal, Carlos V. .. 23
Vinyl chloride At molecular level . 71
Lesions on liver ... 154
Workers' diseases .. 89
Viral antigens 381
Viral DNA 5
Vitamin A acid 344
Vitamin B_{12} in pregnancy 108
Vitamin D and diabetes 348
Vitamin E 199
Vogel, Gerald 376
Volosov, V. D. 72
von Hayek, Friedrich A. 245
Vortices, Quantized. 68, 69

W

Wahl, H. 55
Wakeling, Alan E. 23
Waldheim, Kurt 351
Walker, Patrick N. 316
Wallace, Benjamin ... 378
Walrus, Numbers of .. 204
Walsh, Fraser 7
Walsh, Leo N. 184
Walter, Paul D. 199
Wang, Daniel I. C. 281
Wang, Richard J. 342
Wang, Y. Y. 116
Ward, Barbara 292
Ware, Richard A. 232
Wasserman, Ira 287
Waste hot water 399
Waste treatment 184
Water, Aerated 73
Water, Chlorinated 311
Water pollution Asbestos 331
Uranium tailings .. 31
Water purification Activated carbon ... 311
Ozonization 362
Water supply Energy or people? . 139
Northeastern states 88
Waterfowl refuges ... 40
Watergate psychology 378
Watson, James D.. 52, 388

Wax, Douglas 104
Weapons, Early 231
Weather, GATE .. 332-334
Weather forecasts 120, 121
Weather warfare 280
Webb, Watt W. 37
Weber, Evelyn J. 169
Wechsler, David 168
Webster, Robert 381
Weight control agent . 165
Weight control program 76
Weill, Hans 154
Weinberg, Alvin M. .. 374
Weinberg, Steven 92
Weinberger, Caspar W. 37, 38
Weissmann, Charles .. 277
Weissman, Sherman .. 52
Weizmann Institute ... 357
Wells, Forrest ... 127, 138
Wensel, Louise 359
Westar II 246
Weymann, Ray 279
Whistler, Roy L. 164, 165
Whitcomb, J. H. 136
Whitcomb, Richard 153, 399
White, Robert M. 121
White House "Responsiveness program" 23
Whitney, William M. . 263
Wichmann, Joseph ... 343
Wild plants, Edible .. 252
9
Wilkinson, J. H. 108
Williams, Betty 68
Williams, Gary A. 344
Williams, Rogers J. .. 165
Willis A. G. 169
Willow wood, Decayed 165
Wilson, A. S. 108
Wilson, R. B. 229
Wimett, T. F. 153
Winblade, Robert 334
Wind circulation 333, 334
Wind engineering 188-191
Wind-tunnel air-speed 88
Winokur, Andrew 57
Winter, David 389
Winter, Peter M. 232
Wives on diet 76
Wixom, Robert L. 91
Wofsky, Steven V. ... 212
Wolfe, John 187, 375
Wolfenstein, Lincoln .. 55
Wolfgang, P. 285
Women
Crowding 283
Medical ads 331
Medical schools 55
Swimmers 376
Wong, Stephen 285
Woodcock, Ted 167
Woodward, Bennie T. . 286
Woolson, Edwin A. ... 184
Worden, Peter 389
Work week, Four-day . 363
Workers' health 154
World Energy Conference 217
World Food Conference 308
Assessment 312
Famine fears 54
Grain game .. 349, 351
International labs .. 309
Let them eat words? 278
Population growth . 340
Rome Forum 292
Technical resolutions 326
World population Underestimated ... 377
World weather ... 332-334
Wright Trophy 399
Wrightson, P. 216
Wyngarden, Lillian J. . 23
Wyss, Max 198

X

X-ray emissions
Crab nebula 311
HEAO's to probe .. 88
Puppis A 26
X-ray laser 296
X-ray observations ... 121
X-ray sensors 330
X-ray sky monitor ... 214
X-ray sources
Triple systems 287
Uhuru map 131
X-ray telescope 182
Xenon-nitrogen bond . 8
Xeroderma pigmentosum 310

Y

Yamani, Ahmad Zaki . 213
Yanagimachi, Ryuzo .. 327
Yariv, Amnon 296
Yates, Cecil E., Jr. 267
Yellowstone plume 105, 392
Yodh, G. B. 8
Youdim, M. G. H. 85
Young, Vernon B. 108
Young, Viola Mae 45
Yunis, E. J. 89, 315

Z

Zech, G. 55
Zeeman, E. Christopher 166
Zelnik, Melvin 6
Zinder, Norton 52
Zipser, Edward 334
Zohar, S. 134
Zuckerman, Benjamin M. 277
Zysk, John R. 164

Back issues of

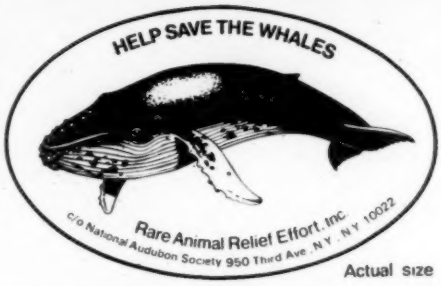
Science News

University Microfilms, a Xerox company, provides back issues of *Science News*, in microfilm / microfiche / 35 millimeter editions. For further information, contact:

Xerox University Microfilms

300 North Zeeb Road
Ann Arbor, Michigan
48106.

HELP SAVE THE WHALES



Actual size

BOYCOTT JAPAN & RUSSIA

For a donation of $1.00 or more, we will send you this beautiful humpback whale button along with information on what else you can do to help save whales from extinction.

Contributions are tax deductible.

Your help will enable us to expand our campaign.

RARE, Inc.

c/o National Audubon Society
950 Third Avenue
New York, N.Y. 10022

A permanent record of

science news

ON

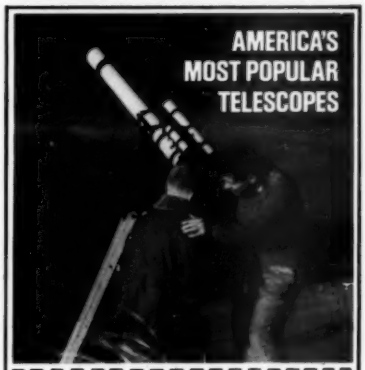
Microfiche

CAN BE OBTAINED FROM

BELL & HOWELL

(The Microfilm People)

MICRO PHOTO DIVISION
Old Mansfield Road
Wooster, Ohio 44691



For over 20 years UNITRON Refractors have been the overwhelming choice of the amateur astronomer and school observatory. Exploring the skies with a telescope is a relaxing and educational diversion for the whole family—a hobby which is especially meaningful in the space age. UNITRON offers a complete line of 22 time-proven telescopes as well as many unique accessories to increase observing pleasure. All are available for purchase using our Easy Payment Plan.

A free UNITRON Catalog is yours for the asking.

Name_____

Address_____

City_____ State_____ Zip_____

W-5

UNITRON

66 NEEDHAM ST., NEWTON HIGHLANDS, MA 02161

Circle No. 131 on Reader Service Card